REMARKS

I. Response to Restriction Requirement

Claims 18, 19, and 30 were withdrawn from consideration as being directed to non-elected inventions. To simplify the issues in the present application, the non-elected claims 18, 19, and 30 have been canceled. Applicants reserve the right to file these claims in a divisional application if desired.

II. Response to Objections to the Claims

The Office Action objected to claims 25 and 26 for a typographical error. The claims have been amended herein according to the Examiner's suggestion. Withdrawal of the objection is respectfully requested.

III. Response to 35 U.S.C. §103 Rejection of Claims 1-7, 14, and 15

Claims 1-7, 14, and 15 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dieckert et al.* (U.S. Patent No. 5,205,783) in view of JP 01-102230. Applicants respectfully traverse this rejection on the grounds that the cited references do not teach or suggest each and every feature of the claims.

A. Claims 1-6

Independent claim1 is reproduced below:

1. A mechanical draft system comprising:

an intake fan for drawing air from ***outside a mechanical room*** into the mechanical room;

a plurality of heating appliances, each heating appliance having an air intake for drawing air from the mechanical room into the heating appliance and having an air exhaust for exhausting air out of the heating appliance;

ducts, connected to the air exhausts of the heating appliances, for transporting air outside the mechanical room;

an exhaust fan, connected to the ducts, for drawing air from the ducts to the atmosphere;

a differential transducer for receiving a first pressure reading from inside the mechanical room and a second pressure reading from the atmosphere, the differential transducer outputting a differential pressure signal indicative of the difference between the first and second pressure readings; and

a pressure controller for controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of heating appliances in response to the differential pressure signal.

(Emphasis added)

The cited references fail to teach or suggest the above-highlighted features of claim 1. For example, independent claim 1 is directed to a mechanical draft system, which includes a ***plurality of heating appliances***, where each heating appliance has an air intake for drawing air from a ***mechanical room***. The cited references, taken alone or in combination, fail to teach or suggest a mechanical draft system having heating appliances and a mechanical room. *Dieckert et al.* teaches an air flow control system having fume hoods 144 for laboratory rooms of a building. However, *Dieckert et al.* fails to teach or suggest ***heating appliances*** as claimed, but instead discloses fume hoods 144 for exhausting chemical fumes. *Dieckert et al.* also fails to teach or suggest that the air flow control system is applicable to a ***mechanical room*** as claimed, but instead discloses that the air flow control system is used for laboratory rooms. Also in contrast to claim 1, JP 01-102230 teaches a ventilating device for a residence, but fails to teach or suggest ***heating appliances*** and a ***mechanical room*** as claimed.

Claim 1 further includes ***a pressure controller for controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of heating appliances in response to the differential pressure signal.*** The cited references fail to teach or suggest this aspect of claim 1. The Office Action seems to suggest that *Dieckert et al.* discloses a pressure transducer (50-2) and a pressure

controller. Applicants respectfully disagree with this interpretation of *Dieckert et al.* The element 50-2 is actually a component of a flow sensor 50 (see col. 9, lines 21-68). The flow sensor 50 of *Dieckert et al.* is not a ***differential transducer*** as claimed, which receives a first pressure reading from ***inside the mechanical room*** and a second pressure reading ***from the atmosphere***. Instead the flow sensor 50 of *Dieckert et al.* senses the flow at the flow cross 50-4 to determine a positive pressure or a negative pressure. The *Dieckert et al.* sensor does not output a differential pressure signal ***indicative of the difference between the first and second pressure readings*** as claimed.

Furthermore, *Dieckert et al.* fails to teach or suggest ***a pressure controller for controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of heating appliances in response to the differential pressure signal*** as claimed. Assuming, for the sake of argument, that *Dieckert et al.* senses the difference between a first pressure reading from inside a mechanical room and a second pressure reading from the atmosphere and outputs a differential pressure signal, *Dieckert et al.* stills falls short in this regard. *Dieckert et al.* does not further comprise a ***pressure controller*** that controls the intake fan, exhaust fan, and heating appliances ***in response to the differential pressure signal.*** Also, *Dieckert et al.* fails to teach ***controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of heating appliances***, as claimed, by a pressure controller or other type of controller.

The JP 01-102230 reference fails to overcome the deficiencies of *Dieckert et al.* as mentioned above. JP 01-102230 appears to disclose a differential pressure sensor 8, which detects the difference in pressure between the interior and exterior of a structure. However, the differential pressure sensor 8 does not control ***the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of heating appliances in response to the differential pressure signal*** as claimed. Instead, JP 01-102230 appears to disclose that the differential pressure sensor 8 provides an output signal to a control device 7, which is connected to a feed fan 5. JP 01-102230

fails to teach or suggest controlling the speed of an exhaust fan and the operation of heating appliances.

For at least these reasons, it is believed that independent claim 1 is allowable over the combination of *Dieckert et al.* and JP 01-102230. Also, claims 2-6 are believed to be allowable for at least the reason that they depend directly or indirectly from allowable independent claim 1.

B. Claims 7, 14, and 15

Independent claim 7 is reproduced below:

7. A pressure controller for controlling the flow of air through a mechanical draft system, the pressure controller comprising:

an appliance controller configured to control the operation of a plurality of appliances;

an intake fan controller configured to control the speed of an intake fan;

an exhaust fan controller configured to control the speed of an exhaust fan; and

a processor configured to receive a differential pressure signal and to control the operation of the plurality of appliances, the speed of the intake fan, and the speed of the exhaust fan in response to the differential pressure signal.

(Emphasis added)

The cited references fail to teach or suggest the above-highlighted features of independent claim 7, which is directed to a pressure controller comprising an appliance controller, an intake fan controller, an exhaust fan controller, and a processor. *Dieckert et al.* and JP 01-102230, taken alone or in combination, fail to teach or suggest an ***appliance controller configured to control the operation of a plurality of appliances***, as claimed.

Furthermore, claim 7 recites that the processor is ***configured to receive a differential pressure signal and to control the operation of the plurality of appliances, the speed of the intake fan, and the speed of the exhaust fan in response to the differential pressure signal.*** The combination of cited references

fails to teach or suggest a processor configured to control the operation of a plurality of appliances and the speed of an exhaust fan, particularly in response to a differential pressure signal.

For at least these reasons, it is believed that independent claim 7 is allowable over the combination of *Dieckert et al.* and JP 01-102230. Also, claims 14 and 15 are believed to be allowable for at least the reason that they depend directly or indirectly from allowable independent claim 7.

IV. Response to 35 U.S.C. §103 Rejection of Claims 8-13, 16, 17, and 20-29

Claims 8-13, 16, 17, and 20-29 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dieckert et al.* in view of JP 01-102230 and *Weimer et al.* (U.S. Patent Application Publication No. 2002/0014538). Applicant respectfully traverses this rejection on the grounds that the cited references do not teach or suggest each and every feature of the claims.

A. Claims 8-13

Independent claim 7 is believed to be allowable over the combination of *Dieckert et al.* and JP 01-102230, as discussed above. Further, Applicants assert that *Weimer et al.* fails to overcome the above-noted deficiencies of *Dieckert et al.* and JP 01-102230. Specifically, *Weimer et al.* fails to disclose a ***processor configured to receive a differential pressure signal and to control the operation of the plurality of appliances, the speed of the intake fan, and the speed of the exhaust fan in response to the differential pressure signal.*** In contrast to claim 7, it appears that *Weimer et al.* merely control a single fan, but fails to teach or suggest a processor configured to control the speed of an intake fan and the speed of an exhaust fan.

Therefore, it is believed that claim 7 is allowable over the cited combination of references. It is also believed that claims 8-13 are allowable for at least the reason that they depend directly or indirectly from allowable independent claim 7.

B. Claims 16-17

Independent claim 16 is reproduced below:

16. A control system for controlling air pressure in a mechanical draft system, the control system comprising:

means for determining a difference in pressure between the atmosphere and the interior of a mechanical room;

means for controller the speed of an intake fan and exhaust fan in response to the difference in pressure; and

means for shutting down a plurality of appliances in the mechanical room when the difference in pressure exceeds a predetermined threshold.

(Emphasis added)

The cited references fail to teach or suggest the above-highlighted features of independent claim 16, which is directed to a control system for controlling air pressure in a mechanical draft system. The control system includes ***means for controlling the speed of an intake fan and exhaust fan in response to [a] difference in pressure***, where the difference in pressure is determined by means for determining a difference in pressure between the atmosphere and the interior of a mechanical room. *Dieckert et al.* appears to be silent concerning controlling the speed of an intake fan and exhaust fan in response to a difference in pressure between the atmosphere and interior of a mechanical room. Also, JP 01-102230 appears to be silent with respect to mechanical rooms.

Although JP 01-102230 appears to detect a difference in pressure between an interior and exterior of a structure 1, it is not clear from this reference what the structure 1 is and whether or not the exterior of this structure 1 is the atmosphere. Assuming, for the sake of argument, that the exterior is the atmosphere, JP 01-102230 still fails to disclose ***means for controlling the speed of an intake fan and exhaust fan in response to the difference in pressure***, as claimed. Although *Weimer et al.* appears to control a single fan, this reference also fails to teach or suggest means for controlling the speed of an intake fan and exhaust fan.

For at least these reasons, it is believed that the combination of cited references fails to teach or suggest each and every aspect of independent claim 16 and that claim 16 is therefore allowable. Also, claim 17 is believed to be allowable for at least the reason that it depends from allowable independent claim 16.

C. **Claims 20-25**

Independent claim 20 is reproduced below:

20. A method for controlling pressure in a mechanical draft system, the method comprising:

checking a differential pressure between the interior of a mechanical room and the atmosphere;

shutting down a plurality of appliances in the mechanical room when the differential pressure exceeds a predetermined threshold; and

adjusting the speed of an intake fan and exhaust fan in the mechanical draft system when the differential pressure is not equalized.

(Emphasis added)

Independent claim 20 is directed to a method for controlling pressure in a mechanical draft system. The method comprises checking a differential pressure between the interior of a mechanical room and the atmosphere and shutting down a plurality of appliances in the mechanical room when the differential pressure exceeds a predetermined threshold. Claim 20 further recites ***adjusting the speed of an intake fan and exhaust fan in the mechanical draft system when the differential pressure is not equalized.*** *Dieckert et al.*, JP 01-102230, and *Weimer et al.*, taken alone or in combination, fail to teach or suggest this aspect of claim 20. Therefore, Applicants contend that claim 20 is allowable over the combination of cited references. Applicants also contend that claims 21-25 are allowable for at least the reason that they depend directly or indirectly from allowable independent claim 20.

D. Claims 26-29

Independent claim 26 is reproduced below:

26. A processor for controlling a mechanical draft system, the processor comprising:

means for shutting down a plurality of appliances when a differential pressure exceeds a predetermined threshold;

means for restarting the appliances in succession in an order based on a priority list; and

means for monitoring the differential pressure to ensure that the means for restarting does not cause the differential pressure to exceed the predetermined threshold.

(Emphasis added)

Independent claim 26 is directed to a processor comprising means for shutting down a plurality of appliances when a differential pressure exceeds a predetermined threshold. Also, claim 26 recites ***means for restarting the appliances in succession in an order based on a priority list***. The Office Action seems to suggest that *Weimer et al.* discloses this aspect of claim 26. Applicants disagree with this interpretation of *Weimer et al.* and respectfully asserts that *Weimer et al.* fails to restart appliances in succession ***in an order based on a priority list***. *Dieckert et al.* and JP 01-102230 are silent with respect to appliances and particularly with respect to an order, based on a priority list, for restarting the appliances. For at least this reason, it is believed that claims 26-29 are allowable over the cited references.

V. Prior Art Made of Record

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-17 and 20-29 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at (770) 933-9500.

Respectfully submitted,

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